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<b>Notice of Allowability</b>	Application No.	Applicant(s)	
	10/019,358	NAKAMURA ET AL.	
	Examiner	Art Unit	
	LAM S. NGUYEN	2853	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**  
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE (03/03/05) and amendment (01/27/05).
2. ☒ The allowed claim(s) is/are 1-4 and 7.
3. ☒ The drawings filed on 24 October 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets" ) must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948 ) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|   | 9. <input type="checkbox"/> Other _____.   |

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jenifer Brooks on 04/13/2005.

The application has been amended as follows:

**In the claims:**

**Claim 1:** Rewrote as follows:

1. An ink jet head, comprising a head body which is provided with a plurality of nozzles and a plurality of pressure chambers and actuators respectively corresponding to the nozzles, and a driver IC for outputting driving signals for driving the actuators, wherein:
  - the actuators are arranged on a surface of the head body in a plurality of columns so as to form a plurality of actuator columns;
  - signal input terminals of the actuators are arranged locally in a predetermined area in a central portion of the surface of the head body between inner actuator columns;
  - the driver IC is provided with signal output terminals arranged so as to respectively correspond to the signal input terminals of the actuators; and
  - the driver IC is mounted on the head body by being directly attached thereto by face down bonding so that the signal output terminals and the signal input terminals are connected to each other,

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wherein the actuator columns include a first central actuator column and a second central actuator column adjacent to each other in a central portion of the head body with respect to a scanning direction, and one or more outer actuator column provided on an outer side of the central actuator columns with respect to the scanning direction,

wherein the actuators of each outer actuator column and the signal input terminals thereof are connected to each other by signal lines passing between actuators of one of the central actuator columns.

**Claim 2:** Line 4, replaced "a" in front of "direction" by --the--.

**Claim 3:** Rewrote as follows:

3. The ink jet head of claim 2, wherein:

the signal input terminals of the actuators are arranged between the first central actuator column and the second central actuator column.

**Claim 5:** Cancelled.

**Claim 6:** Cancelled.

**Claim 8:** Cancelled.

**Claim 9:** Cancelled.

**Claim 10:** Cancelled.

**Claim 11:** Cancelled.

**Claim 12:** Cancelled.

**Claim 13:** Cancelled.

**Claim 14:** Cancelled.

**Claim 15:** Cancelled.

**Claim 16:** Cancelled.

**Claim 17:** Cancelled.

**Claim 18:** Cancelled.

**Claim 19:** Cancelled.

**Claim 20:** Cancelled.

**Claim 21:** Cancelled.

**Claim 22:** Cancelled.

***REASONS FOR ALLOWANCE***

The following is an examiner's statement of reasons for allowance: The reasons for allowance of claim 1 were indicated in the previous office action as regarding to the original claim 3.

Claims 2-4 and 7 are allowed because they depend directly/indirectly on claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S. NGUYEN whose telephone number is (571)272-2151. The examiner can normally be reached on 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (571)272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN  
April 19, 2005



HAI PHAM  
PRIMARY EXAMINER